Geometry 8.2 Assignment
Problem Solving in Geometry with Proportions
(pp 465-467)

1. What is your name?

Complete the sentence.

2. If $\frac{m}{n}=\frac{5}{9}$, then $\frac{n}{m}=\frac{?}{?}$

3. If $\frac{m}{n}=\frac{5}{9}$, then $\frac{m}{5}=\frac{?}{?}$

4. If $\frac{m}{n}=\frac{5}{9}$, then $\frac{m+n}{n}=\frac{?}{?}$

5. If $\frac{m}{n}=\frac{5}{9}$, then $\frac{?}{?}=\frac{14}{9}$

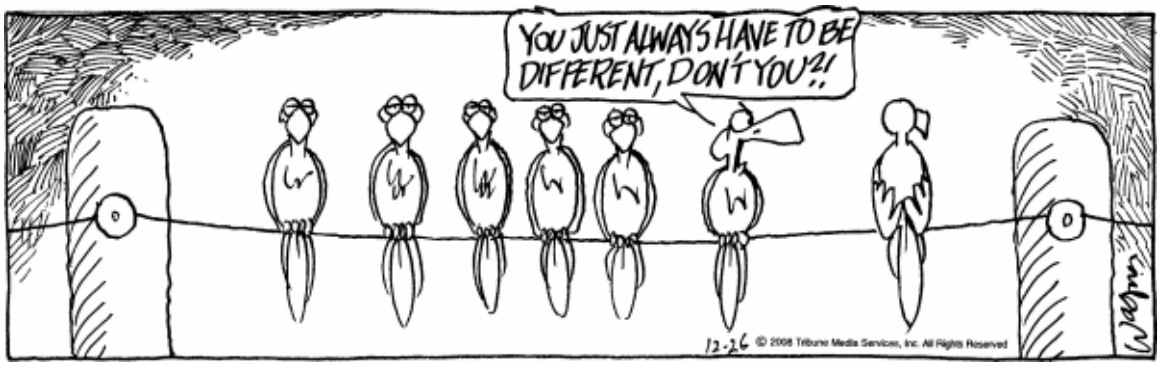
Find the geometric mean of the two numbers.

6. 8.5 & 12.4

7. a & 4a

8. 15 & 24

9. 2a & 4a



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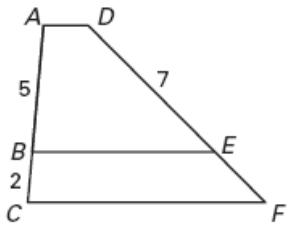
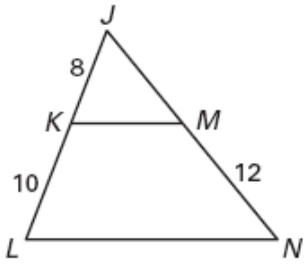
Use the diagram and the given information to find the unknown length.

10. Given: $\frac{AB}{AC}=\frac{DE}{DF}$**,** find EF.



11. Given: $\frac{JK}{KL}=\frac{JM}{MN}$, find JN.



12. The points (-2, -3), (8, 7), and (x, -6) are collinear. Find the value of *x* by solving the proportion.

$$\frac{-3-7}{-2-8}=\frac{-3-(-6)}{-2-x}$$

13. The points (-4, 6), (2, -2), and (x, -6) are collinear. Find the value of *x* by solving the proportion.

$$\frac{6-(-2)}{-4-2}=\frac{-2-(-6)}{2-x}$$

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14. A quality control engineer for a certain buyer found that the ratio of defective units to total units is 1:35. At this rate, what is the expected number of defective units in a shipment of 28,000?

15. _____ There are 24 fish in an aquarium. If $\frac{1}{8}$ of the fish are tetras, and $\frac{2}{3}$ of the remaining fish are guppies, how many guppies are in the aquarium?

A. 2
B. 3
C . 10
D. 14
E. 16

16. _____ A basketball team had a ratio of wins to losses of 3 : 1. After winning 6 games in a row, the team's ratio of wins to losses was 5 : 1. How many games had the team won before it won the 6 games in a row?

A. 3
B. 6
C. 9
D. 15
E. 24

Review.

Find the area of the figure described. *(Chapter 1 Section 7)*

17. Rectangle: width = 3 m, length = 4 m

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Find the area of the figure described. *(Chapter 1 Section 7)*

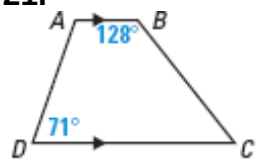
18. Triangle: base = 13 cm, height = 4 cm

19. Square: side = 3 cm

20. Circle: diameter = 11 ft

Find the angle measures. *(Chapter 6 Section 5).*

21.



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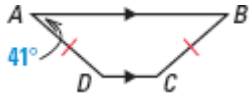

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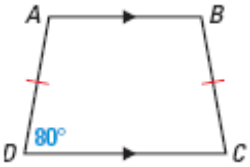

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